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## **CLAIMS**

A method for fabricating a high density ceramic thick film comprising the steps of:

providing vehicle comprising an organic binder and solvent; dispersing ceramic powders into the vehicle to be paste; forming the paste to thick film by screen printing; removing the organic binder from the film;

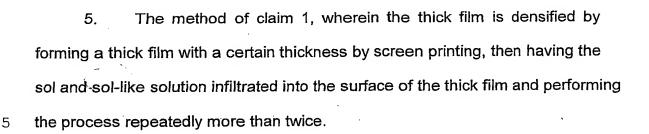
applying sol or sol-like solution to the surface of the film so that the sol or sol-like solution can infiltrate into the film;

removing remaining sol or sol-like solution from the surface of the film by spinning the film;

drying and preheating the film; and sintering the film at the range from 700 to 1200°C.

2. The method of claim 1, wherein the sol-like solution has metal organic PZT component separated, mixed or dissolved in a solvent.

- 3. The method of claim 1, wherein the sol or sol-like solution are identical components with the ceramic powder.
  - 4. The method of claim 1, wherein the sol or sol-like solution are not identical components with the ceramic powder.



3b A<sup>2</sup> 6 The method of claim 1, wherein sintering temperature is 800 to 900°C in case of sintering.

- 7. The method of claim 1, wherein the thickness of the thick film is at the range of 1 to 200  $\mu m$ .
  - 8. A method for fabricating a high density ceramic thick film comprising the steps of:
- providing vehicle comprising an organic binder and solvent;
  dispersing ceramic powders into the vehicle to be paste;
  forming the paste to thick film by screen printing;
  removing the organic binder from the film;
- applying sol or sol-like solution to the surface of the film so that the sol
  or sol-like solution can infiltrate into the film; and
  sintering the film at 600 to 700°C.

A method for fabricating a high density ceramic thick film

comprising the steps of:

providing vehicle comprising an organic binder and solvent;

dispersing ceramic powders into the vehicle to be paste;

forming the paste to thick film by screen printing;

removing the organic binder from the film;

applying sol or sol-like solution to the surface of the film so that the sol or sol-like solution can infiltrate into the film;

removing remaining sol or sol-like solution from the surface of the film by spinning the film;

drying and preheating the film;

sintering the film;

applying solior sol-like solution to the surface of the film again so that the sol or sol-like solution can infiltrate into the film; and

sintering the film;

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